

FIG.1

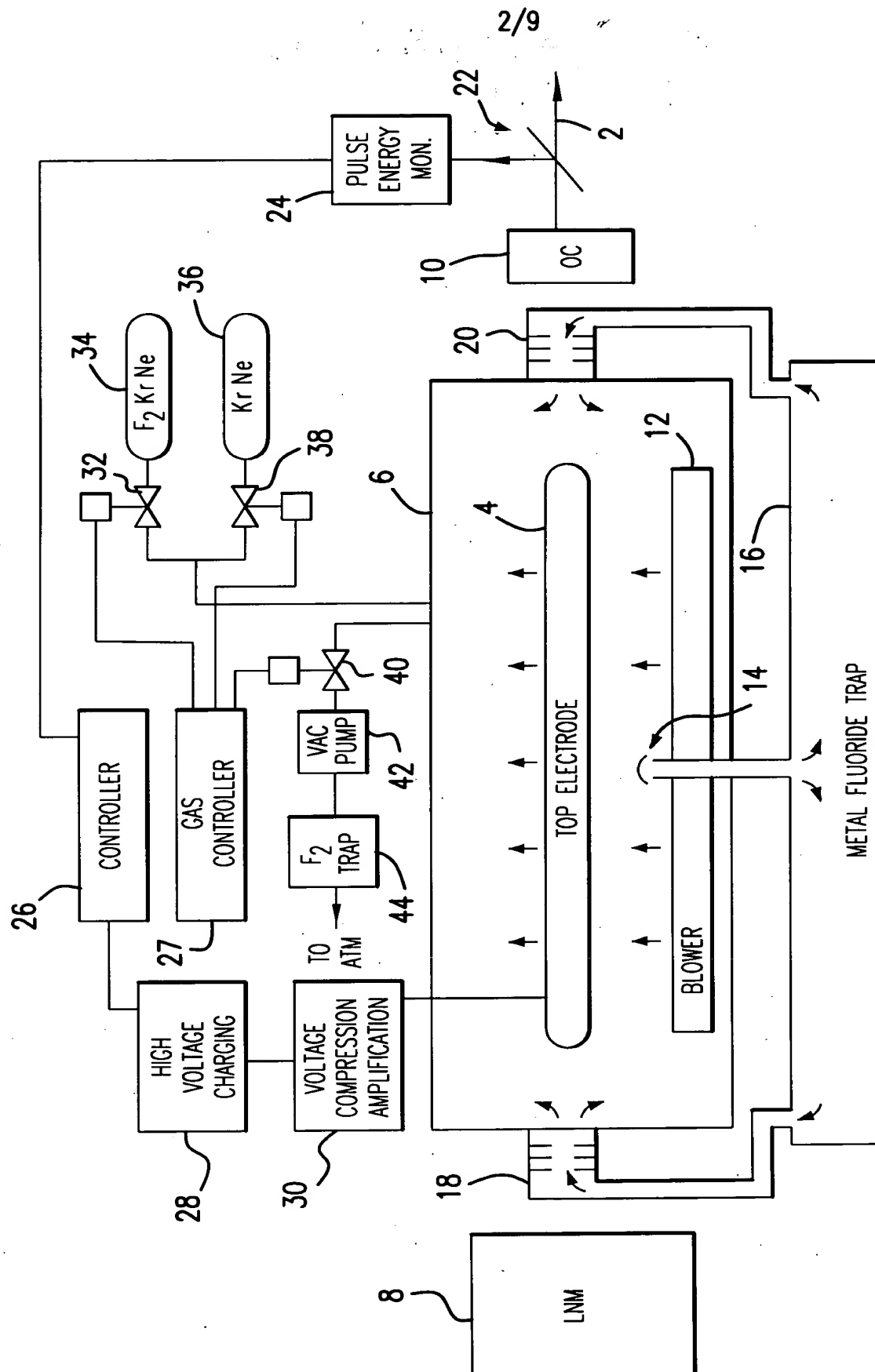


FIG. 2  
PRIOR ART

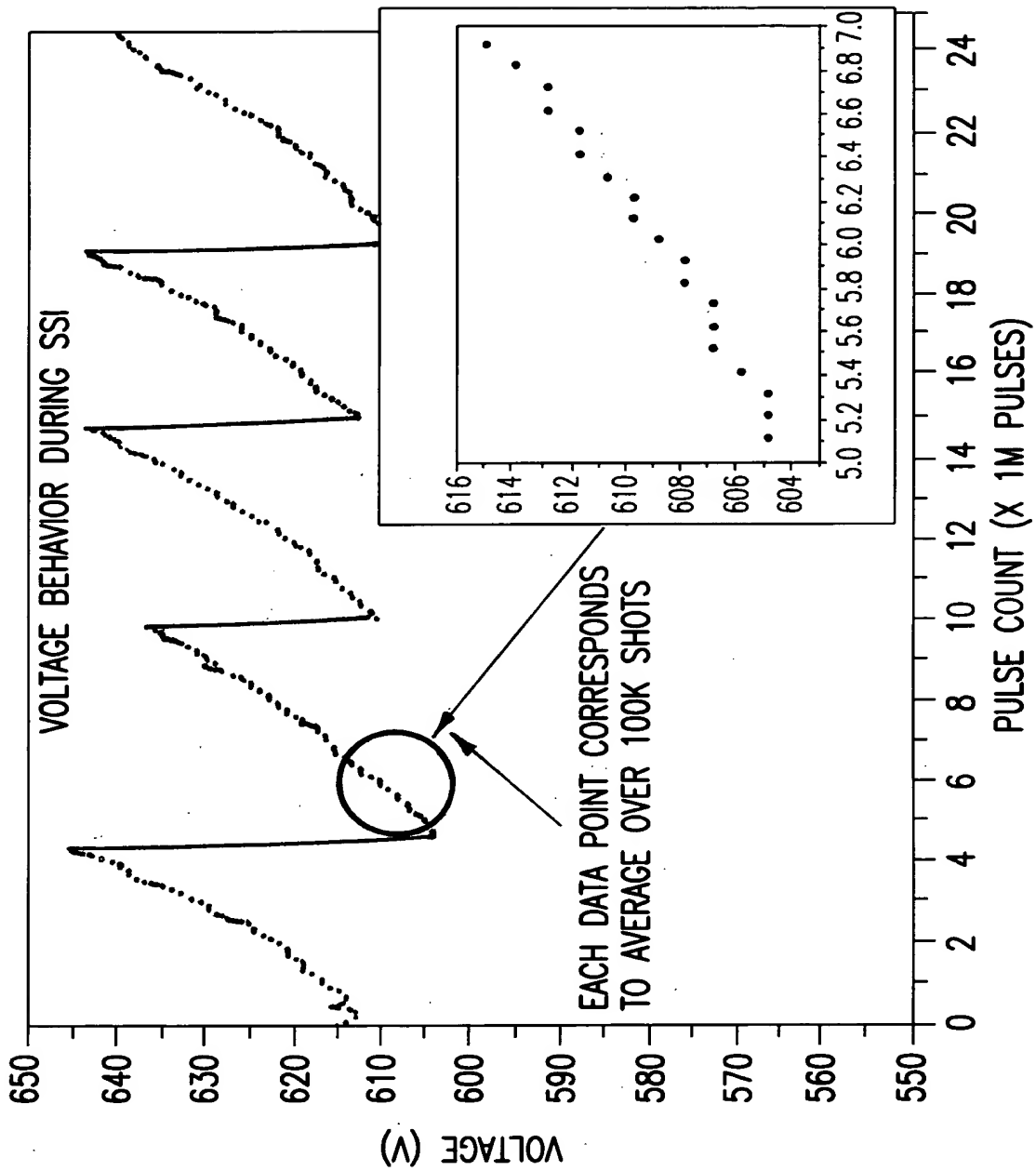


FIG.3

**FIG. 4**

The diagram illustrates a complex experimental setup for isotope ratio measurement. Key components include:

- Laser System (8):** Consists of a Laser Noise Modulator (LNM) and a laser tube.
- UV Source (54):** A UV source powered by a Power Supply (55) and N<sub>2</sub> gas (52), with a lens (56) and a filter (58).
- Sample and Reference Cells (50):** An F<sub>2</sub> Sample Cell and a Reference Cell, with a Metal Fluoride Trap (16) in between.
- Gas Handling System:** Includes a Controller (26), Gas Controller (27), High Voltage Charging (28), and various gas traps (32, 34, 36, 38) for F<sub>2</sub>, Kr, and Ne.
- Electrode and Pumping:** A Top Electrode (12) with a Blower, and a Vacuum Pump (42) connected to the system.
- Detection and Control:** A Pulse Energy Monitor (24) and a PMT (66) for signal detection, and a Chopper (62) for modulation.

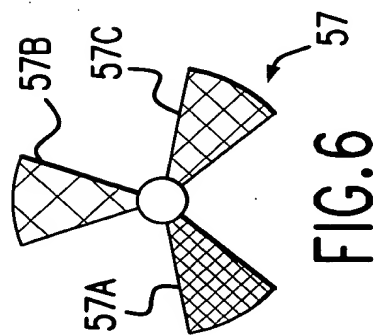
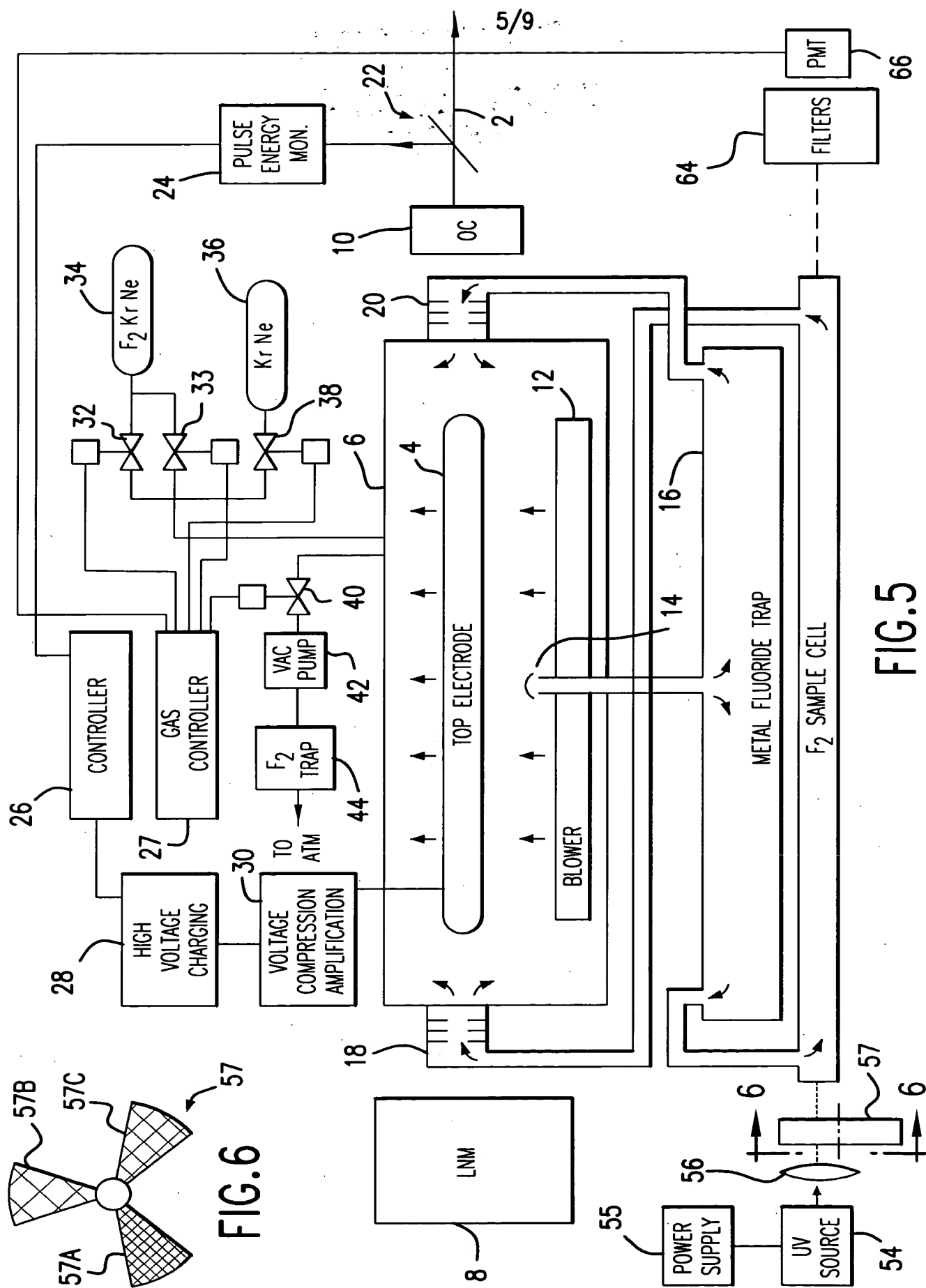


FIG. 6



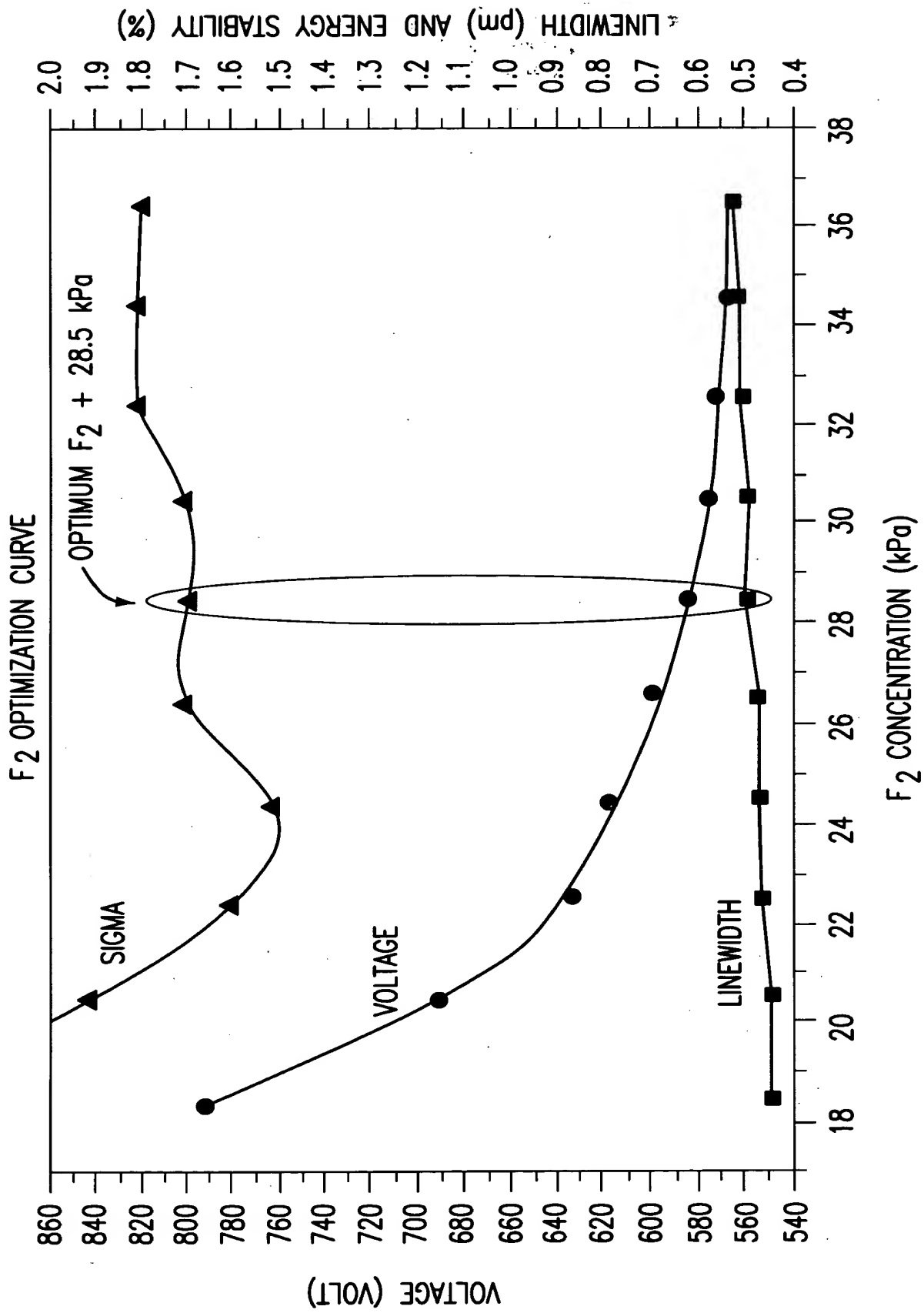


FIG.7

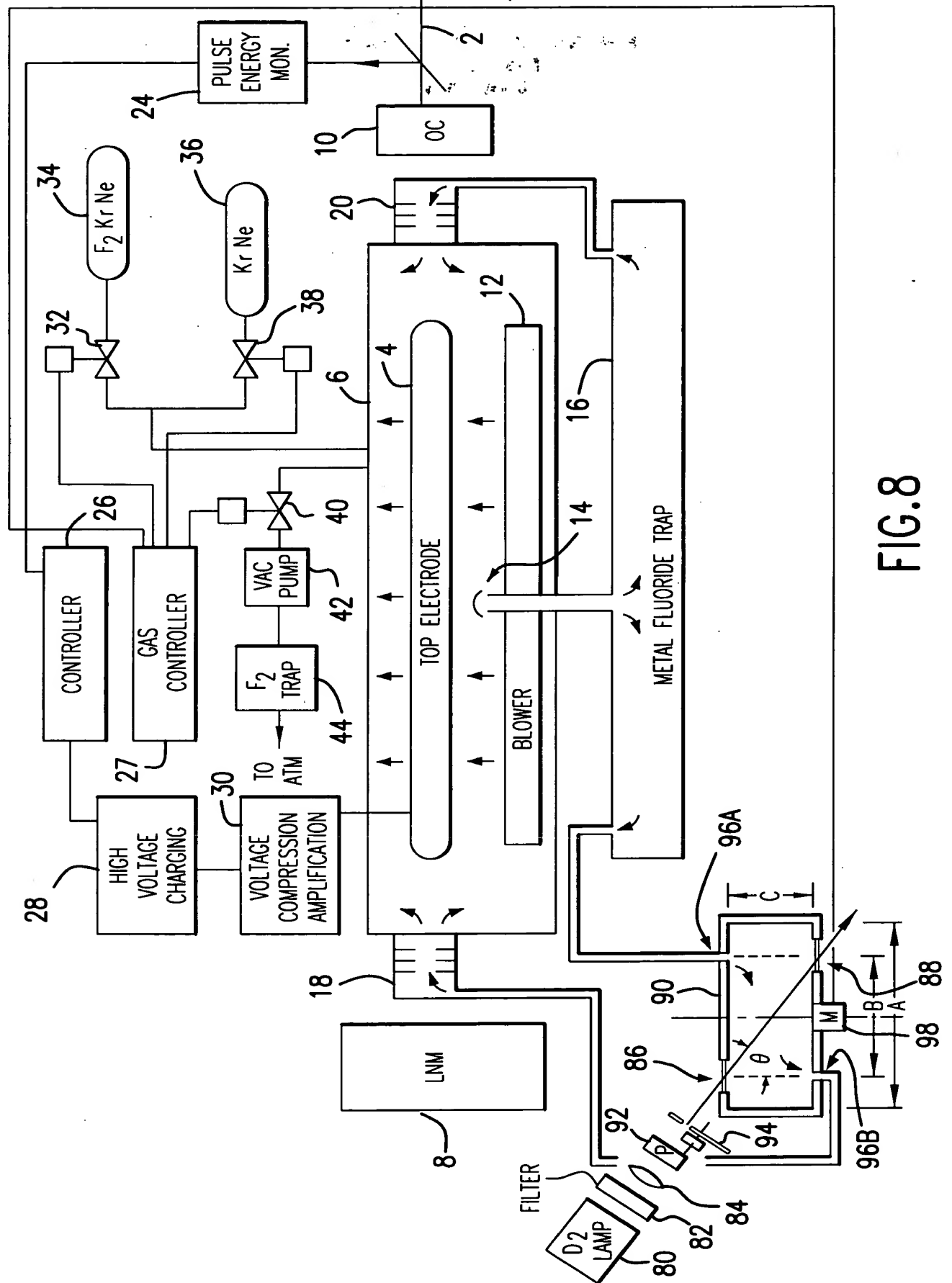


FIG.8

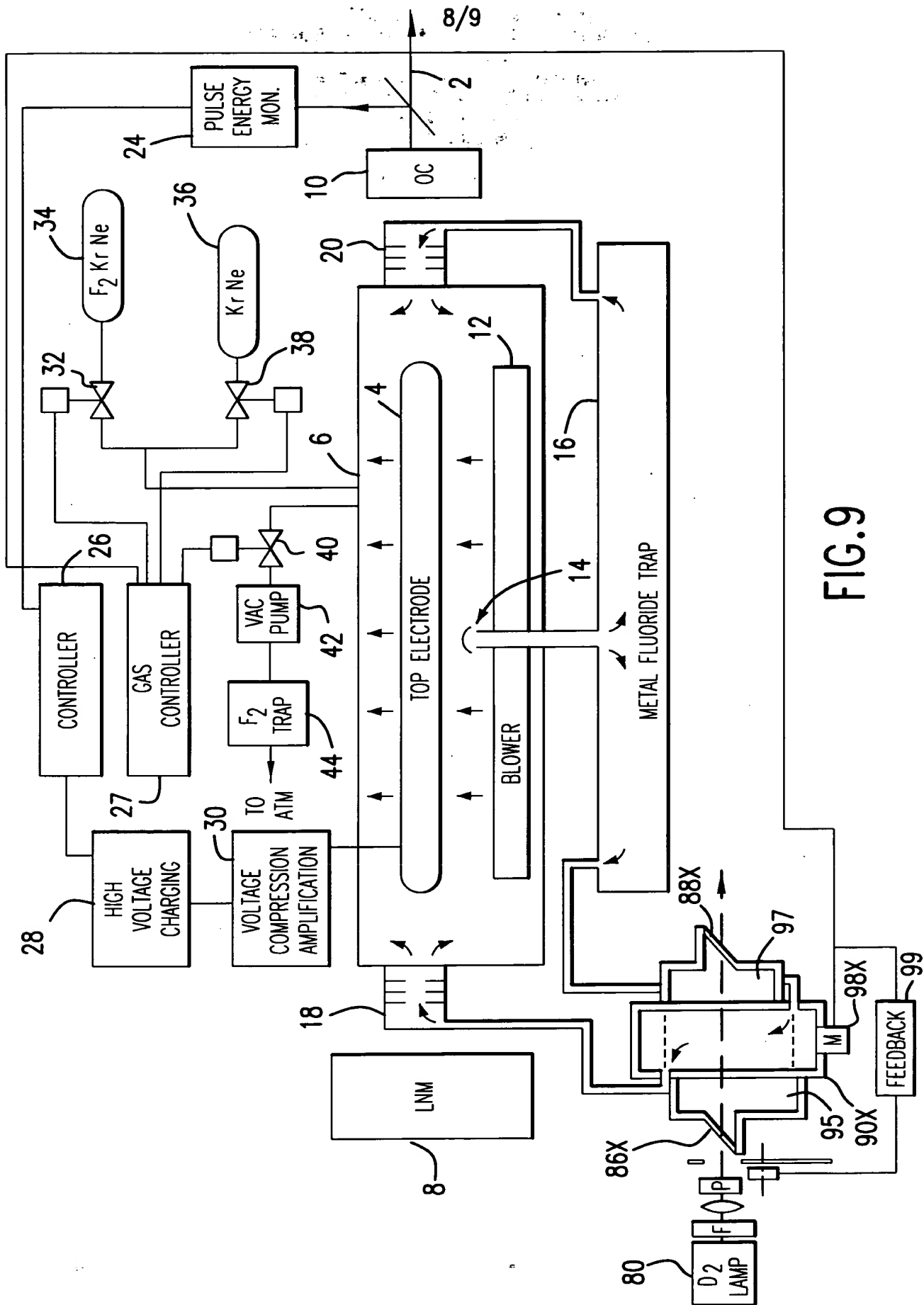


FIG. 9



## THE ABSORPTION SPECTRUM OF FLUORINE

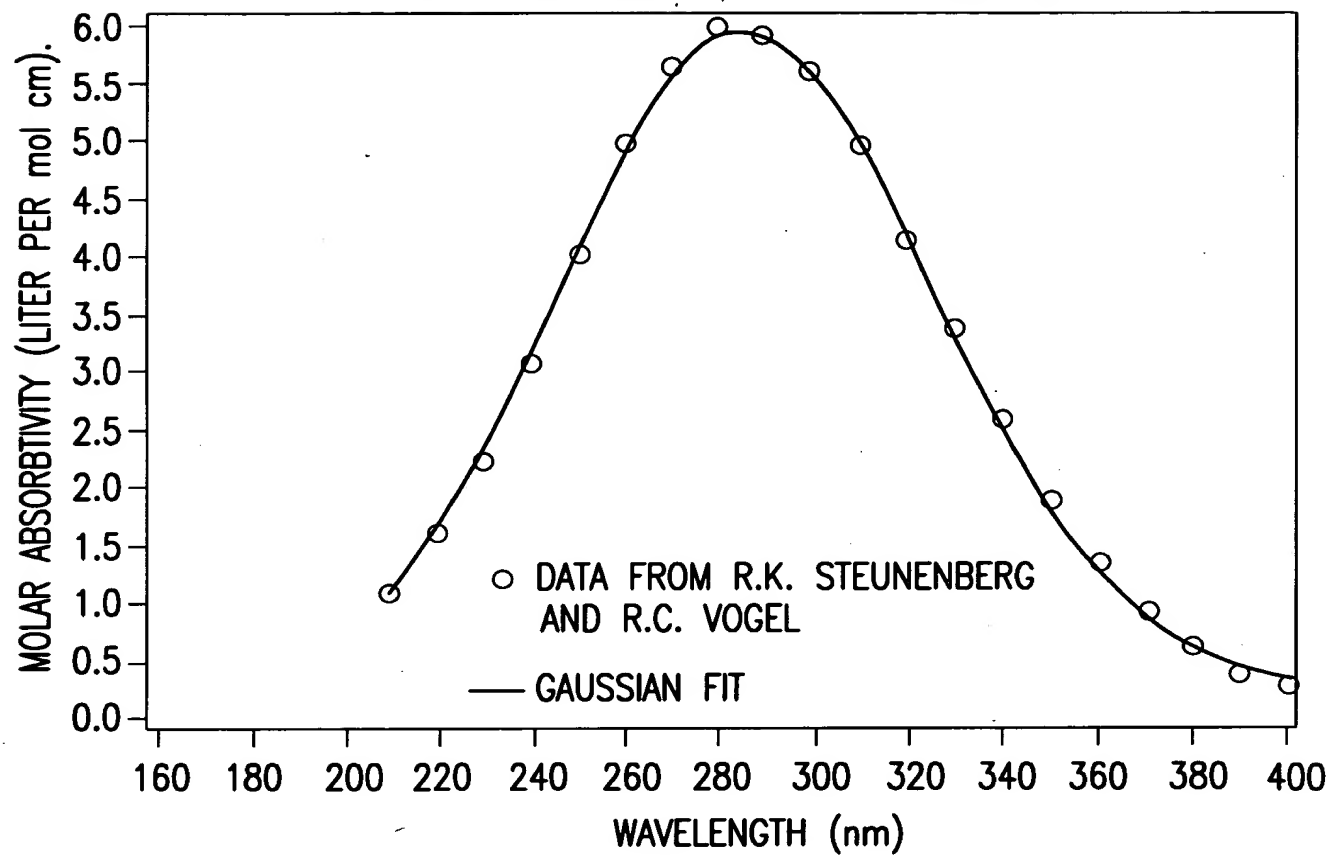


FIG.10